L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:979801 CAPLUS Full-text
DN 145:335955
TI Method for making caprolactam from impure 6-aminocapronitrile
IN Allgeier, Alan M.; Ostermaier, John J.; Sengupta, Sourav Kumar
PA USA
SO U.S. Pat. Appl. Publ., 10pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006211859	A1	20060921	US 2005-83715	20050318
	WO 2006101870	A1	20060928	WO 2006-US9231	20060315

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2005-83715 A 20050318
OS CASREACT 145:335955

AB ε-Caprolactam is produced by the vapor-phase hydrolytic cyclization of 6-aminocapronitrile. A crude liquid caprolactam comprising ε-caprolactam (CL), 6-aminocapronitrile (ACN), and water obtained from the vapor-phase cyclization reaction of ACN is contacted with hydrogen in the presence of a hydrogenation catalyst (e.g., Raney Ni) to convert the ACN in the crude liquid caprolactam into hexamethylenediamine (HMD) and hexamethyleneimine (HMI). The HMD and HMI have lower b.ps. compared to ACN and thus they are more easily separated from CL in subsequent distillation operations. This process makes CL from ACN with fewer distillation stages, and with a lower pressure drop and a lower base temperature; process flow diagrams are presented.

Appl's

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:141024 CAPLUS Full-text
DN 142:221615
TI Process for caprolactam purification through hydrogenation of cyclohexanone oxime rearrangement products
IN Lemmens, Joannes Albertus Wilhelmus; Smeets, Theodorus Maria; Brandts, Paul Maria; Ceyssens, Koen Harry Maria
PA DSM IP Assets B. V., Neth.
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005014538	A1	20050217	WO 2004-EP8009	20040716
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1648865	A1	20060426	EP 2004-763310	20040716
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1829687	A	20060906	CN 2004-80021620	20040716
	BR 2004012833	A	20060926	BR 2004-12833	20040716
	JP 2006528649	T	20061221	JP 2006-521454	20040716
	MX 2006PA01028	A	20060427	MX 2006-PA1028	20060125
	US 2007060750	A1	20070315	US 2006-565774	20060906
PRAI	EP 2003-77338	A	20030725		
	WO 2004-EP8009	W	20040716		

OS CASREACT 142:221615

AB A process for purifying caprolactam comprises: (a) subjecting the caprolactam to a hydrogenation by treating the caprolactam with hydrogen in the presence of a heterogeneous nickel containing hydrogenation catalyst; (b) distilling at least a portion of the hydrogenated caprolactam in a distillation column containing nickel in an amount sufficiently low such that ΔPANNi ≤ 3, wherein ΔPANNi = ΔPAN - ΔPANNi=0, ΔPAN = increase of the PAN number of caprolactam during distg ., ΔPANNi=0 increase of the PAN number of caprolactam during distilling under the same conditions in a distillation column free of nickel. Nickel is removed from the caprolactam solution prior to the distillation step.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1975:498134 CAPLUS Full-text
DN 83:98134
TI Purification of ε-caprolactam
IN Borowiak, Marek; Berak, Jozef; Heropolitanski, Ryszard
PA Instytut Chemii Przemyslowej, Pol.
SO Pol., 3 pp.
CODEN: POXXA7
DT Patent
LA Polish
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 71843	A5	19740629	PL 1971-151471	19711110
PRAI	PL 1971-151471	A	19711110		

AB ε-Caprolactam (I) [105-60-2] was purified by catalytic hydrogenation of contaminants with H in the presence of Raney-type catalysts; the method gave reproducible results and a good product. Thus, 60 g of Ni-Al alloy containing 42% Ni in 400 ml H2O was treated with 325 ml of 20% NaOH at 40°, the mixture was heated at 90° for 0.5 hr, and the catalyst separated The catalyst (2 g) was added to 1 l 43% aqueous solution of I (permanganante number 900), which was preliminarily purified by treatment with trichloroethylene, extraction with H2O, and passage through an ion exchanger column, and 240 mg of H3BO3 was added. The mixture was hydrogenated at 120° and 6 atm for 1.5 hr, filtered, and distilled to give I (permanganate number 6960).

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1973:160322 CAPLUS Full-text
DN 78:160322
TI Purification of caprolactam
IN Suzuki, Seiya; Sekoguchi, Ken; Yonehara, Shunsuke; Ichimura, Fumio
PA Toray Industries, Inc.
SO Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48003638	B4	19730201	JP 1970-27461	19700402

AB Crude caprolactam [105-60-2], prepared by the Beckmann rearrangement of cyclohexanone oxime obtained by cyclohexane photonitration) was purified by distillation (without alkali addition) and hydrogenation at 130-40.deg./3-10 atm in the presence of Raney Ni and activated carbon, followed by treatment with anion and cation exchange resins.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1972:435203 CAPLUS Full-text
DN 77:35203
TI Catalytic manufacture of highly pure ε-caprolactams
IN Naumann, Hans J.; Winzer, Werner; Wagner, Klaus; Baetz, Robert; Schlemmer, Leo; Dennhardt, Stefan
SO Ger. (East), 6 pp.
CODEN: GEXXA8
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DD 82921		19710705	DD 1970-146551	19700601

AB A 25-35% aqueous ε-caprolactam (I) [105-60-2] solution, prepared by cyclohexanone oxime rearrangement, neutralization with NH3, extraction with trichloroethylene (II), and extraction of the I-II solution with water, is evaporated to .geq.60% I content, and the solution, containing <100 ppm II, is saturated with H at 1-10 atm, passed at 60-130.deg. over a Ni-SiO2 catalyst containing >50% Ni, and distilled (with or without the addition of 0.5% NaOH) to give purified I which gives white polycaprolactam [25038-54-4] having good mech. properties and light resistance.